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Ontario Department of Education

SYLLABUS

OF

SUMMER COURSES AND EXAMINATIONS

FOR

The Elementary Certificate

IN

Manual Training

1937

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COURSE OF STUDY LEADING TO THE ELEMENTARY MANUAL TRAINING CERTIFICATE

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1. Length of Course:

The course shall consist of two parts, of 125 clock hours each. Part I shall be taken before Part II.

2. Objects of the Course:

(a) To provide training for the teacher conducting Manual Training in a rural school.

(b) To assist the Auxiliary Class teacher to develop and perfect the handwork which forms a large part of his curriculum.

(c) To provide the regular grade teacher with a background of handwork experiences for the enrichment of the regular curriculum.

Notes—

(1) The Elementary Manual Training Certificate is accepted in lieu of two of the university subjects that are required for the Permanent First Class Certificate (see Circular 72).

(2) The Elementary Manual Training Certificate is accepted in lieu of the Fall Term of the Course leading to the Intermediate Manual Training Certificate.

3. Requirements for Admission:

Teachers who hold at least a Second Class Certificate may be admitted to the course.

4. Applications for Admission:

Application for admission shall be made on an official form to be obtained from the Deputy Minister.

PART I

SUBJECTS OF STUDY

1. Constructive Work (40 Clock Hours)

A. Paper Cutting and Folding:

An extension of the Normal School course with emphasis on correlating values. Freehand cutting of the common shapes of trees with the corresponding shapes of leaves and fruits, common flowers, seasonal decorations for room and home, scenes to represent stories, reproductions of simple scenes to illustrate geographical, historical or nature stories, cut from coloured paper and mounted suitably on cover paper. Tracing from mimeograph or hectograph sheets on surface paper of objects too difficult for the child to draw. These to be mounted on a suitable stiff cover paper. Such objects as the proper positions in physical training exercises made in silhouette, Santa Claus for Christmas, Rabbit for Easter, etc., birds, animals traced, cut and mounted. Designs, borders and

patterns made from paper folding in 4, 5 and 6 units, and used as decorations for the models in cardboard construction. Floral designs conventionalized to conform to the shape of the object as well as crayons for decorative purposes.

B. Cardboard Construction:

Simple exercises in light weight cardboard suitable to second or third book classes and involving measurements of the various fractions of the inch. Envelopes, sleighs, doll furniture, wall pockets, set squares to be used in constructive work, berry baskets, trays, boxes, etc. Geometrical construction of the type solids; cube, square prism, triangular prism, pyramid, cone, cylinder.

C. Paper Weaving and Basketry:

In paper weaving such things as mats of various patterns and degrees of difficulty, book marks, baskets, boxes, animals and birds. In basketry, the use of reed and raffia in the making of trays using a prepared base, baskets, sewing boxes, serviette rings, etc.

D. Modelling and Design:

Plasticine, salt and flour, and clay used. Extension of the Normal School work in the making of objects based on the sphere, disc, rolls, etc., followed by plate designs of geometrical and floral units. Preparation of plasticine models for the sandtable to illustrate nature study, geography, history, etc. Relief maps, scenes, dress of little people of other lands, birds, animals, from salt and flour and coloured, or from coloured plasticine.

E. Linoleum Block Printing:

Working out the designs to be used, tracing them on battleship linoleum, cutting the edges or veining followed by gouging out the background. Printing, using printer's ink thinned with coal oil or prepared block printing inks of a variety of colours. These mounted to form pictures, silhouettes, folders, cards, calendars, etc.

F. Rope Work:

Things suitable to the Rural centre as the rope halter involving the crown and tuck, eye within the rope and eye at the end of the rope. The short and long splice and knots of practical use in everyday life. (See O.A.C. Bulletin No. 327, 1933).

G. Soap Carving:

From a cheap grade of soap that is comparatively soft, letters, leaves, fruits, vegetables, animals, birds, busts, etc.

2. Woodwork (70 Clock Hours)

The woodwork of this part restricted to models executed in the common and more easily-worked woods, and requiring for the most part the tools shown in Regulation 23 of Manual Training Regulations. Models closely related to the content of the school curriculum and based on the real needs of the pupils. The development of satisfactory tool habits.

A. Coping Saw Work:

Toys, toy furniture, picture puzzles, models depicting farm life, birds, animals, objects and figures descriptive of and pertinent to foreign countries.

B. Thin and Strip Woodwork:

From prepared strip material simple objects such as model ladders, toys, garden trellises, gates, fences. Objects in thin wood such as pencil sharpeners, match scratchers, plant labels, pencil boxes, key labels.

C. Simple Bench Tool Operations:

Models involving squaring stock, the butt joint (face to face, edge to face and end to face) the dado joint, the rabbet joint, the cross half-lap joint, the dowel joint. The models include a mitre box, a coping saw jack, a bench hook. Other articles for the house, farm or school, such as nail boxes, shelves, book ends, book racks, bird houses (plain and rustic material), shooting board, etc.

D. Wood Finishing:

Sandpapering, filling, staining, shellacking and painting as required for the models made during the course. The importance of thorough sanding to be stressed.

E. Materials and Tools:

The study of timber and the woods in common use, distinguishing characteristics—defects in lumber, checks, shakes, rot—methods of seasoning and caring for lumber.

Selection and preparation of materials used in finishing, care of brushes.

Fastening devices—nails, screws, glue.

A thorough study of the parts, adjustments and care of the bench tools and some incidental attention to such other tools as may be required in the construction of the models.

F. Shop Practice:

The students to practise from the outset good shop procedures. Attention directed to the systematic daily care and check up of equipment and accommodation, to economic use of materials and supplies and to suitable means of dealing with scrap and salvage material and the disposal and storage of unfinished projects, etc.

3. Mechanical Drawing (15 Clock Hours)

Geometrical layouts, stretch out patterns and the like applied directly as each occurs in the constructive work and woodwork. Formal instruction in mechanical drawing devoted to (1) a study of orthographic projection as required for interpreting and making the simple two and three-view drawings, (2) the oblique method of pictorial representation. Emphasis placed on the making of neat freehand dimensioned sketches drawn to scale. The drafting conventions of the American Standards Association with respect to arrangement of views, linework, dimensioning, and lettering. About ten drawings made.

4. Organization and Methods

Covered incidentally in connection with the other work. The formal discussion of this topic deferred till Part II. Attention drawn to the possibilities of using suitable salvage material such as packing boxes, tea boxes, cigar boxes, orange crates, wall paper, shingles, etc.

STANDING OF STUDENTS

The final standing of the students will be determined by:

(1) Valuation of term's work under the following headings—

	Maximum	Minimum
Constructive Work	100	60
Woodwork	100	60
Shop Practice	100	60
Mechanical Drawing	100	60
(2) Examinations in—		
Constructive Work	100	50
Materials and Tools	100	50
Mechanical Drawing	100	50

PART II

SUBJECTS OF STUDY

1. Cardboard Construction Work and Bookbinding (10 Clock Hours)

Making of models based on the geometrical solids as houses, barns, silos, churches, etc. Scale models of castles, Dutch mills, schools, churches, lighthouses, sawmills, etc., for use on the sandtable and in connection with the teaching of the other subjects of the school curriculum. Making of portfolio and notebook covers, binding of magazines and simple repairs of school books.

2. Shopwork (80 Clock Hours)

A. Bench Woodwork:

Models demanding a higher degree of hand skill and care in tool manipulation and practice and requiring additional joints such as the mitre, mortise and tenon, dovetail lap, and various modifications and combinations. Certain articles of equipment for use in the shop and classrooms, such as winding sticks, hardwood vices for the bending and filing of sheet metal, weaving frames. Some experience in the use of such tools as auger and centre bits, rabbet and dado planes, the compass saw, the spoke shave, the cabinet scraper, handclamps and bar clamps. Chip carving for decorative purposes applied to appropriate models.

B. Wood Finishing:

An extension of the work covered in Part I. Polishing and the choice and preparation of polishing materials to be stressed.

C. Metal Work:

Decorative devices in copper, brass and iron for application to the models made and to provide elementary experiences in cutting, filing, bending, soldering, rivetting, etching. The work to include such things as simple box corners, escutcheon plates, hinges, name plates, numerals, whisk holders. Simple domestic articles of tin plate.

D. Materials and Tools (10 Clock Hours):

Selection and identification of suitable material for the models; warping in wood, cause, prevention and correction; quarter cut lumber; sources of the commonly used woods; bulletins and books issued by the Department of Forestry. A display board of typical samples of the more commonly used woods to be prepared by each student.

Specifying, ordering and costs of other materials such as copper, brass, tin plate, solder, glue, nails, brads, screws, finishing materials, etc., as used in the projects.

Further attention to the tools used in Part I as well as a study in the care and operation of the additional tools now required. Specific practice in sharpening and reconditioning such tools as chisels, plane irons and cabinet scrapers. Careful attention directed to the development of correct tool using habits. The history and development of the standard tools.

E. Household Mechanics:

As opportunities occur, attention directed to simple household jobs and repairs such as, wiring a lamp, repairing an extension cord, glazing a sash, hanging a door, hanging pictures, cabinets, book shelves to walls, installing screens, gluing furniture, touching up marred finishes.

F. Shop Practice:

As in Part I, the strict observance of satisfactory shop practices. Attention directed to the proper stacking and storing of materials, unfinished and finished projects, to the economical use of materials, to the value of time, to the arrangement of tools and equipment, etc. The instructor's rating of each student in shop practice to be an important part of the final standing.

3. Mechanical Drawing

A formal course in drawing not included in this part. Sketches and drawings made in connection with the shop work and the course of study work. Incidental instruction provided where necessary. The general principles of sectioning, making bills of materials, the isometric drawing included. A final examination to be provided in this subject.

4. Courses of Study, Equipment Lists, Budgets, Etc. (25 Clock Hours)

Consideration given to the kinds of projects suitable for including in manual training courses. An outline of a course of study prepared in terms of tools, operations, materials and related content. Drawings and sketches of the models of the course of study.

Each student to complete the following exercises in terms of the situation in his school. Where necessary typical situations assigned to students without schools.

(i) An extension of the minimum equipment list shown in Regulation 23 of the Manual Training Regulations. Sketches of work benches and cupboards.

(ii) A floor plan of suitable manual training accommodations.

(iii) An annual budget, showing the quantities and varieties of material required, together with the costs of the same.

5. Theory and Methods (10 Clock Hours)

A. General:

Aims, integration and correlation with other subjects, seat and busy work, application of the general method of teaching to manual training, group and individual instruction.

B. Special Problems in Rural Schools:

Introduction, accommodations, equipment, supplies, organization of school, handling several grades, maintenance, discipline, government grants and regulations.

STANDING

The final standing of the students will be determined by—

(1) Valuation of term's work under the following headings:

	Maximum	Minimum
Carbdoard Work and Bookbinding	100	60
Woodwork	100	60
Metal Work	100	60
Shop Practice	100	60
Course of Study, etc.	100	60

(2) Examinations in:

Materials and Tools	100	50
Drawing and Design	100	50
Theory and Methods	100	50